1 Interview Summaries

1.1 Focus Group for Surveyors and Engineers

Interview Type   Focus Group, Private Sector, Municipality (DWP), State Agency (DOT)
Interview Location   Cross Building, Augusta
Interview Date   October 30, 2001
Summary Date   November 5, 2001
Interviewer   CDM / Marianne MacDonald, macdonaldml@cdm.com
Interviewed: Jon Giles, City of Portland Dept. of Public Works, jag@ci.portland.me.us
                Timothy LeSiege, Dept. of Transportation, tim.lesiege@state.me.us
                David Carr, Duke Engineering & Services, dwcarr1@dukeengineering.com
                Steven Pelletier, Woodlot Alternatives, spelletier@woodlotalt.com
                Daniel Riley, Sebago Technics, driley@sebagotechnics.com

1.1.1 Overview

Attendees represented surveyors and engineers in the State of Maine from the private sector as well as state and local government. Participants included:

- Jon Giles, GIS Coordinator for the City of Portland's Department of Public Works and representative for Maine Surveyors

- David Carr, Senior GIS Specialist for Duke Engineering & Services, with primary focus on GIS in support of consulting to the utility industry

- Daniel Riley, Engineer and GIS specialist with Sebago Technics, with primary focus on GIS in support of engineering and planning consulting services

- Steven Pelletier, Vice President, Wildlife Biologist and wetland scientist for Woodlot Alternatives, with primary focus on GIS in support of environmental consulting services

- Timothy LeSiege, Civil Engineer for Maine Department of Transportation (DOT) with oversight responsibility for the department's orthophotography and geodetic data.

The group was extremely knowledgeable about and experienced with the use of GIS and the development of GIS data. The sentiment of the group was that surveying in Maine is a fairly automated process with regards to the use of GPS and CADD. However, the use of an assumed coordinate system during data collection hampers the ability to integrate the data into GIS. Participants were generally supportive of a statewide GIS initiative that would facilitate data sharing and education.

1.1.2 Business Functions

The group discussed a number of GIS related business processes that their organizations are involved in on a regular basis. These business processes are:

- Data Development - all participants were involved in the development of spatial data, often for project and/or site specific purposes. For private business, the development of data is for their clients. For the public sector, data maintenance is another closely

related business process. It is not usually the case that data can be shared or obtained from another source for use on specific projects due to variations in site location, accuracy needs and timeliness. The biggest issue associated with data development is the use of an assumed coordinate system for survey data put into CADD software. If data were required to be collected with some defined coordinate system it would provide a large amount of spatial data that could be shared and reused for other projects and purposes. Another issue associated with data development is the need to include meta-data so that future potential end users of the data can trust that the data is suitable for their specific needs. Often existing data may not be used because of a lack of faith in the appropriateness of the data.

- Environmental Planning and Analysis – the private sector participants are often hired by their clients to provide environmental consulting services such as watershed planning and wetland delineation. For DOT and the private sector, GIS is used as a tool to support this business process. Data development is often necessary to enable the use of GIS as discussed above.

- Cadastral Research – many of the participants were involved in cadastral research to support development and siting projects in both the private and public sector. Spatial data may be used and/or developed in association with this work.

- Field Inventories – some of the participants utilized GIS as part of the collection of field data for specific geographic areas. Data collected as part of these inventories may include natural resources as well as man-made structures, and varies depending on the specific project or client.

- Other Business Processes – Routing and Hydrologic Modeling were two other business processes mentioned by participants. These processes were not common to multiple participants.

1.1.3 Data

A number of spatial data sets are utilized to support the business processes discussed above. These include:

- High Accuracy Reference Network (HARN) data. There are 80 official HARN data points in Maine and these are maintained by DOT. DOT also has approximately 7,000 additional points that are not officially part of HARN, but that are consistently re-creatable.

- Aerial Mapping and Aerial Imagery. Different agencies and organizations have different accuracy needs for mapping.

- Property Ownership and assessor's data. This data is utilized both in spatial and non-spatial format by address.

- National Wetland Mapping. OGIS has this data, but often a higher level of accuracy is required for specific projects.

- Soils data. Often a higher level of accuracy and precision is needed for project specific needs than what is available from Federal sources.

- Zoning. Participants felt it would be useful to have generalized zoning data across the state since each town has their own zoning codes.

- Permit data. Data is used for municipal, state and federal permits. It would be useful to have a cross referenced index of permit data.

- Right of Way data.

- Conservation Easements.

- Town Line Surveys.

- Vegetative Cover types with a classification scheme.

- Infrastructure including E-911, transportation and utilities.

Participants also noted that it would be useful to have a geographic index or catalog of locations where site plans were done, even if it simply provided a reference to paper. This would enable those seeking spatial data or doing research to determine if similar work has already been done in an area.

1.1.4   Statewide GIS Initiative Needs

Participants had a number of ideas for initiatives that the State could undertake to support GIS in Maine. While some of these needs would benefit the participants or their organizations, the discussion was mainly focused on activities that were for the good of GIS in the State.

- Education/Outreach – The experiences of the participants indicated that local governments often need support ranging from technical assistance to guidance with GIS implementation. Specific needs discussed include:

  o Implementation Assistance - Participants noted that they have seen some towns shy away from GIS as too expensive an undertaking when they could achieve some real value with a small-scale system. Having access to information about implementation experiences of other towns in terms of investment in software, hardware and data development would be beneficial to those municipalities that are considering an investment in GIS.

  o Boilerplate Language – To ensure that digital spatial and non-spatial data developed for municipalities or other public entities will become the property of that organization, it would be useful to develop and disseminate language that can be used in requests for proposals and contracts involving the creation of digital data. It was noted that digital data does not always get delivered to the entity for which it was developed, and in some cases the entity is not the owner of the data. This limits the amount of data available for sharing.

- Data – There is a need both for spatial data and for indices of data that exists. This is a need for the focus group participants, as well as for GIS users across the state. While the creation of data would be useful to some, it may not be of the appropriate scale, accuracy or content for all users. In addition, data would need to be maintained so that it remained useful. Participants were open to the idea of paying a fee for a

service that provides updated statewide parcel data. Specific data related needs discussed by the group include:

- o Use of a defined coordinate system – The participants indicated that an assumed coordinate system is often used in the development of data, and this makes it more difficult to utilize the data in GIS. It was not felt that a specific coordinate system needed to be established, but only that a system be defined so that data can be converted if necessary.

- o Metadata – Participants indicated that one barrier to data sharing is a lack of trust in existing data. Datasets must have complete and up to date metadata about who created the data, method and date of data collection, purpose for the data, accuracy, scale, etc. so that potential future end users can determine if it is appropriate for their needs.

- o Standard Attribute Types – Participants felt it would be useful to have a set of standard attributes for data to increase the value of data to potential future users. Specifics about these attributes were not discussed.

- o Data Repository – In order to facilitate data sharing there needs to be a place to put data that is developed. To encourage data sharing there may need to be some incentives provided so that those organizations that develop data will share it with others.

- o Maintenance Funding – To ensure that shared data remains valuable and useable, funding should be available to those organizations responsible for maintaining shared data. Participants felt that if the state were to collect fees for data from private businesses, those fees should be passed back to the municipalities or organization maintaining the data.

- Champions – Participants noted that in their experience the existence of a GIS Champion contributed significantly to the success of GIS in an organization. To encourage GIS use there may be a need to foster champions across the State. One idea for doing this may be to provide a simple "ready to run" GIS that new GIS users could work with to grow interest in and understanding of GIS.

1.1.5 Stakeholder Roles

The group discussed the following GIS stakeholders, and the appropriate role for each in a statewide GIS initiative.

- State – Participants felt the state had a number of roles to play in a statewide GIS initiative. This includes:
  - o Providing/Coordinating education and training efforts
  - o Assisting local governments with implementation planning
  - o Creating and providing spatial data
  - o Enabling the sharing of data
  - o Developing and providing a "ready to run" GIS for municipalities to introduce them to the value of GIS.

- Local Government – The primary role of local governments would be create and share data and meta-data, and to maintain the data.

- Private Sector – Participants felt that the private sector could play a role in providing education and in providing guidance for implementation planning. It was not felt that the private sector should be expected to provide shared data, unless it was developed for a public entity. Representatives of the private sector expressed interest in a program where they would pay a fee for shared data that was maintained by the public sector since it would save them the cost of developing data on their own.

- Universities – Participants felt that there would be value in developing partnerships for GIS research between Universities and the public and private sector to further the use and development of GIS in the State.

1.1.6 Major Benefits and Cost Justification

A number of benefits were identified from a statewide GIS initiative that supported data sharing and coordination. The most quantifiable benefit of GIS coordination is the avoided cost of data development when data exists from another source. Data development can be a costly effort. Often other potential end users of data do not know that data exists, or they are not comfortable using existing data due to uncertainties about its appropriateness. Addressing the needs discussed in section 1.1.4 under Data will help ensure that the maximum value is obtained from data development efforts.

Other benefits of GIS coordination identified by participants are less quantifiable, but equally important. These include:

- **Better planning** with regards to environmental protection, development and other concerns for the state, local governments and the private sector. Having more data available provides a greater breadth and depth of information for use in planning efforts.

- **More accurate analysis.** Participants felt that analyses conducted for specific projects would improve if more data were available.

- **More complete information for decision-making.** It was noted that decisions get made based upon the information available to decision makers at the time. With a statewide GIS initiative that supports data sharing and coordination, more information would be available to inform a wide variety of decision-making needs.

- **Better coordination** across the State. Some participants indicated that it would be helpful for them to consider spatial information outside of their local boundaries, but that this data is not available to them. This results in the consideration of only local information for planning and decision-making.

- **Better Service.** It was noted that having better data coordination and data sharing would enable public organizations to provide better service to their constituents. One example given was the ability to provide information to potential new businesses in support of economic development efforts.

Overall, participants felt that data needs to be viewed as a valuable resource deserving of public investment, and that various data sets are most valuable when used together, rather than individually.